Construction joint not shown for clarity, see standard plans for details.

If unsuitable material is encountered, excavation of unsuitable material and furnishing and placing of granular backfill shall be in accordance with Sec 206.

If any part of the barrel is exposed, the roadway fill shall be warped to

(a) Culvert

Flood Elevation = _____
Overtopping Flood Frequency = ___ years
Overtopping Flood Discharge = ___ cfs
Outlet Velocity = __ ft/s
Base Flood Discharge = ___ cfs
Design Flood (D.F.) Elevation = _____
Design Flood Discharge = ___ cfs
Design Flood Frequency = ___ years

Hydrologic Data

Drainage Area = ___ mi²
Design Flood Frequency = ___ year a
Design Flood discharge = ___ cfs (300-year)
Base Flood = ___ cfs
Base Flood Discharge = ___ ft³/sec
Estimated Discharge = ___ ft³/sec

Elevations

F. Culvert

Design (All units) =    ft
Rdwy at Culvert =     ft

Fill Heights

Overlapping Flood Discharge = ___ cfs
Overlapping Flood Frequency = ___ year a

Location Sketch

General Elevation A-A

Granular Backfill

W = Total length normal to Culvert or Median

6 "

(3 ' x ') CONCRETE BOX CULVERT

3( ' x ') CONCRETE BOX CULVERT

Earth fill or roadway.

Dimensions are based on end units.

Granular Backfill Limits

Flow

Flow

Hydraulic Data

Equivalent Fluid Pressure = 30 lb/cf (min.), 60 lb/cf (max.)
Vehicular = HL-93 minus lane load, Earth = 120 lb/cf

Design Notes:

Design Specifications:
Design Loadings:

Concrete = 4,000 psi, Earth = 120 ksf
Equivalent FDC Pressure = 30 ksf
Design Unit Stresses:

Reinforcing Steel (Culverts-Bridge) f'c = 4,000 psi
Steel = 60,000 psi

Standard Plans:

Class B-1 Concrete (Culverts-Bridge) f'c = 4,000 psi
Class B-1 Concrete (Box Culvert) f'c = 4,000 psi
Cast-in-Place Concrete Box used

Precast Concrete Box used

When alternate precast concrete box sections are used, the minimum distance from inside face of headwall to precast section shall be 3 feet.

Reinforcement and dimensions for wings and headwalls shall be in accordance with Missouri Standard Plans.

Reinforcing Steel (Grade 60) fy = 60,000 psi
Miscellaneous:

Project Name:

Bridge No.

Contractor:

Date Prepared

MO

JOB NO.

CULVERT-BRIDGE: ROUTE * OVER *

ABO1 * MILES * OF *

ROUTE * FROM * TO *

M I S S O U R I  H I G H W A Y S  A N D  T R A N S P O R T A T I O N

1 - 8 8 8 - A S K - M O D O T  ( 1 - 8 8 8 - 2 7 5 - 6 6 3 6 )

NOT BE CONSIDERED

THIS MEDIA SHOULD

CULVERT-BRIDGE: ROUTE * OVER *

ABO1 * MILES * OF *

ROUTE * FROM * TO *

M I S S O U R I  H I G H W A Y S  A N D  T R A N S P O R T A T I O N

1 - 8 8 8 - A S K - M O D O T  ( 1 - 8 8 8 - 2 7 5 - 6 6 3 6 )

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1 - 8 8 8 - A S K - M O D O T  ( 1 - 8 8 8 - 2 7 5 - 6 6 3 6 )

NOT BE CONSIDERED

THIS MEDIA SHOULD
### Standard Drawing Guidance

Do not show on plans. Turn off the 'ND' flag.

Some details have been grouped together in this addendum. These may be added to the standard plan or when any part of the unit is nonstandard, the standard plan or when culverts are required.

- **Unit No.**
- **F.L. Elev.**
- **Wall Reinforcement**
- **Spa.**
- **Thickness**
- **Offset**
- **Flow**
- **PLAN OF LAYOUT DIMENSIONS**
- **PLAN OF TRANSVERSE JOINTS AND STAGE CONSTRUCTION**
- **ALT. PLAN OF TRANVERSE JOINTS**
- **FILL HEIGTHS**
- **Variation Dimensions**
- **Substitute Table**
- **Alternate Plan of Transverse Joints**

#### Alternate and Supplemental Details

- **Supplemental Pipe Inlet Details**
- **Alternate Details for Multiple Design Fill Heights**
- **Estimated Quantities**

#### Fill Heights

- **Fill Heights**
  - Class 4 Brick
  - Reinforcing Steel
  - Corrugated Pipe Culvert

#### Partial Removal of Culvert-Bridge Concrete

- **Partial Removal of Culvert-Bridge Concrete**

#### Standard Plan 703.87

- Substitute Table for tables shown on Standard Plan 703.87

#### Plan of Transverse Joints

- **Corresponds to the border of the standard drawing for ease in moving alternate details (Snap to corner)**

---

**PLAN OF LAYOUT DIMENSIONS**

<table>
<thead>
<tr>
<th>Unit No.</th>
<th>Length</th>
<th>Member Temperatures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Fill Heights**

- **Fill Heights**
  - Class 4 Brick
  - Reinforcing Steel
  - Corrugated Pipe Culvert

**Partial Removal of Culvert-Bridge Concrete**

- **Partial Removal of Culvert-Bridge Concrete**

**Standard Plan 703.87**

- Substitute Table for tables shown on Standard Plan 703.87

**Alternate Plan of Transverse Joints**

- **Corresponds to the border of the standard drawing for ease in moving alternate details (Snap to corner)**